

Answer Key

1. $\frac{19}{2}$
 $9 \times 2 + 1 = 19$
2. $\frac{23}{10}$
 $2 \times 10 + 3 = 23$
3. $\frac{26}{3}$
 $8 \times 3 + 2 = 26$
4. $\frac{37}{4}$
 $9 \times 4 + 1 = 37$
5. $\frac{40}{3}$
 $13 \times 3 + 1 = 40$
6. $\frac{33}{4}$
 $8 \times 4 + 1 = 33$
7. $\frac{21}{5}$
 $4 \times 5 + 1 = 21$
8. $\frac{19}{6}$
 $3 \times 6 + 1 = 19$
9. $\frac{41}{6}$
 $6 \times 6 + 5 = 41$
10. $\frac{57}{8}$
 $7 \times 8 + 1 = 57$
11. 9
12. 7
13. 9
14. 4
15. 12
16. 19
17. 23
18. 38
19. 28
20. 13
21. $6\frac{1}{3}$
 $19 \div 3 = 6 \text{ r } 1$
22. $9\frac{2}{3}$
 $29 \div 3 = 9 \text{ r } 2$
23. $9\frac{1}{3}$
 $28 \div 3 = 9 \text{ r } 1$
24. $6\frac{1}{4}$
 $25 \div 4 = 6 \text{ r } 1$
25. $7\frac{1}{4}$
 $29 \div 4 = 7 \text{ r } 1$
26. $8\frac{3}{4}$
 $35 \div 4 = 8 \text{ r } 3$
27. $5\frac{1}{5}$
 $26 \div 5 = 5 \text{ r } 1$
28. $5\frac{3}{5}$
 $28 \div 5 = 5 \text{ r } 3$
29. $6\frac{1}{6}$
 $37 \div 6 = 6 \text{ r } 1$
30. $7\frac{1}{10}$
 $71 \div 10 = 7 \text{ r } 1$
31. $\frac{7}{8}$
32. $\frac{2}{3}$
33. $\frac{5}{8}$
34. $3/5$
35. $\frac{5}{6}$
36. $\frac{2}{12} = \frac{1}{6}$
37. $\frac{2}{8} = \frac{1}{4}$
38. $2/4 = 1/2$
39. $\frac{1}{10}$
40. $\frac{3}{4}$ mile
41. {1, 3, 11, 33}
42. {1, 3, 13, 39}
43. {1, 2, 19, 38}
44. {1, 5, 7, 35}
45. {1, 3, 5, 9, 15, 45}
46. {1, 2, 3, 4, 6, 9, 12, 18, 36}
47. {1, 2, 4, 5, 8, 10, 20, 40}
48. {1, 2, 4, 11, 22, 44}
49. {1, 2, 3, 6, 7, 14, 21, 42}
50. {2, 3, 5, 7, 11, 13, 17, 19}
51. $1\frac{4}{8}$
52. $\frac{1}{6}$
53. $1\frac{5}{8}$
54. $\frac{2}{4}$

MAP 230 (T1) Issue 6

55. $1\frac{1}{9}$
56. $3 \times 90 = 270$
57. C
 $35 - 10 = 25$
 $25 \div 5 = 5$
58. $987 - 678 = \underline{309}$
59. $5 \times 5 = \$25$
60. $72 \div 6 = 12$
 $12 \times 4 = 48$
61. $720 \div 8 = 90$
62. $3 \times 25 = 75$
 $2 \times 10 = 20$
 $4 \times 1 = 4$
 $3 + 2 + 4 = 9$ coins
63. 1 dollar = 4 quarters
 $4 \times 45 = 180$
64. $4240 \div 4 = 1,060$
65. $\frac{1}{8} \times 32 = 4$
66. $1 - \frac{1}{2} - \frac{3}{8} = \frac{1}{8} = 1/8$
67. 875
68. $2 \times 60 + 30 = 150$
 $150 - 120 = 20$ min
69. $\frac{1}{3}(12 + 24 + 15) = \17
70. $\frac{1}{3} \times 60 = \underline{20 \text{ sec}}$
71. $1910 - 14 = 1896$
72. $72 \div 2 = 36$
 $36 \div 4 = 9$ marbles
73. $\frac{1}{2}(24) = \$12$
74. $\frac{1}{4}(40) = 10$
75. $19.25 \div 7 = 2.75$

Answer Key

- | | | | |
|--------------------|---------------------|--------------------|--------------------|
| 1. $11\frac{1}{6}$ | 6. $9\frac{1}{2}$ | 11. 3 | 16. 22 |
| 2. $11\frac{1}{8}$ | 7. $11\frac{1}{6}$ | 12. 6 | 17. 15 |
| 3. $8\frac{1}{9}$ | 8. $10\frac{5}{8}$ | 13. 10 | 18. 21 |
| 4. $10\frac{1}{4}$ | 9. $8\frac{1}{9}$ | 14. 14 | 19. 27 |
| 5. $6\frac{1}{3}$ | 10. $7\frac{1}{2}$ | 15. 30 | 20. 33 |
| 21. $\frac{1}{2}$ | 26. $\frac{15}{28}$ | 31. $1\frac{4}{6}$ | 36. $1\frac{4}{5}$ |
| 22. $\frac{2}{5}$ | 27. $\frac{4}{45}$ | 32. $1\frac{3}{4}$ | 37. $1\frac{4}{7}$ |
| 23. $\frac{7}{9}$ | 28. $\frac{25}{63}$ | 33. $1\frac{2}{5}$ | 38. $1\frac{5}{6}$ |
| 24. $\frac{1}{14}$ | 29. $\frac{27}{80}$ | 34. $\frac{1}{10}$ | 39. $1\frac{3}{7}$ |
| 25. $\frac{2}{21}$ | 30. $\frac{1}{3}$ | 35. $1\frac{3}{4}$ | 40. $1\frac{5}{6}$ |
| 41. 30 | 46. 10 | 51. $\frac{4}{5}$ | 56. $\frac{3}{7}$ |
| 42. 54 | 47. 49 | 52. $\frac{7}{8}$ | 57. $\frac{2}{9}$ |
| 43. 27 | 48. 15 | 53. $\frac{8}{11}$ | 58. $\frac{6}{7}$ |
| 44. 24 | 49. 8 | 54. $\frac{4}{9}$ | 59. $\frac{3}{10}$ |
| 45. 27 | 50. 14 | 55. $\frac{3}{4}$ | 60. $\frac{7}{10}$ |

MAP 240+ (T1) Issue 6

- | | | | |
|---|---|--|---|
| 61. 8.5 | 66. 4.75 | 71. 0.08 | 76. 50 |
| 62. 2.5 | 67. 7.5 | 72. 125 | 77. 0.7 |
| 63. 5.5 | 68. 9.25 | 73. 125 | 78. 4 |
| 64. 10.5 | 69. 5.25 | 74. 0.15 | 79. 0.024 |
| 65. 3.25 | 70. 2.25 | 75. 25 | 80. 50 |
| 81. 0.4375 | 86. 17 | 91. 9 tickets | 96. 5 (pounds) |
| 82. 16.25 | 87. 95 | 92. 30 | 97. \$1920 |
| 83. 16.25 | 88. 151.6 | 93. 20 quarts (smaller) | 98. \$10 |
| 84. 32.5 | 89. 60.8 | 94. 2 hrs | 99. 16 (boys) |
| 85. 4.125 | 90. 65 | 95. 8 (pounds) | 100. 60 miles per hour |
| 101. $60 \div 20 = 3$
$2(20 + 3) = 46$ inches | 104. $400 \div 25 = 16$ gallons | 108. $14 \times 2 + 5 = 33$
(points) | 110. D = 15
$15 \div 3 = 5$ (M)
$5 \times 2 = 10$ (J) |
| 102. $250 \div 50 = 5$ hrs | 105. $144 \div 9 = 16$ races | 109. $20 - 5 = 15$
$2 \times 15 = \$30$ | |
| 103. $10 - 2.3 \times 3 = 10 - 6.9$
$= \$3.10$ | 106. $25\frac{3}{4} + 6\frac{3}{8} = 32\frac{1}{8}$
(pounds) | | |
| | 107. $15.25 \times 4 = \$61$ | | |

MAP 250+ (T1) Issue 6

Answer Key

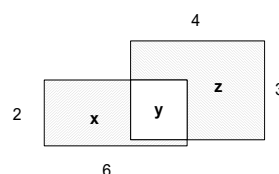
- | | | | |
|--|---|---|---|
| 1. $1/150$ | 6. $37/105$ | 11. $9/8$ | 16. $7/6$ |
| 2. $11/15$ | 7. $41/84$ | 12. $4/5$ | 17. $2/9$ |
| 3. $13/90$ | 8. $5/12$ | 13. $7/9$ | 18. $5/9$ |
| 4. $21/100$ | 9. $67/360$ | 14. $5/6$ | 19. $2/3$ |
| 5. $29/60$ | 10. $8/135$ | 15. $4/9$ | 20. $3/7$ |
| 21. $16/28$ | 26. $18/24$ | 31. 8.5 | 36. 4.75 |
| 22. $4/18$ | 27. $14/18$ | 32. 2.5 | 37. 7.5 |
| 23. $15/27$ | 28. $21/27$ | 33. 5.5 | 38. 9.25 |
| 24. $1/3$ | 29. $24/27$ | 34. 10.5 | 39. 5.25 |
| 25. $3/5$ | 30. $12/36$ | 35. 3.25 | 40. 2.25 |
| 41. 10 | 46. 49 | 51. 99 | 56. 128 |
| 42. 24 | 47. 20 | 52. 105 | 57. 123 |
| 43. 16 | 48. 16 | 53. 98 | 58. 129 |
| 44. 21 | 49. 14 | 54. 106 | 59. 122 |
| 45. 64 | 50. 63 | 55. 124 | 60. 130 |
| 61. $\frac{2}{3}$ | 66. $\frac{15}{32}$ | 71. $\frac{3}{10}$ | 76. $\frac{6}{25}$ |
| 62. $\frac{5}{7}$ | 67. $\frac{28}{45}$ | 72. $\frac{1}{4}$ | 77. $\frac{1}{4}$ |
| 63. $\frac{9}{10}$ | 68. $\frac{9}{70}$ | 73. $\frac{3}{5}$ | 78. $\frac{9}{25}$ |
| 64. $\frac{5}{18}$ | 69. $\frac{2}{3}$ | 74. $\frac{3}{25}$ | 79. $9\frac{17}{20}$ |
| 65. $\frac{18}{25}$ | 70. $\frac{2}{5}$ | 75. $\frac{4}{5}$ | 80. $2\frac{13}{20}$ |
| 81. 0.3 | 86. 75 | 91. $1\frac{4}{15}$ | 96. 10 |
| 82. 150 | 87. 350 | 92. $2/5$ | 97. 9 |
| 83. 0.175 | 88. 0.1 | 93. $4/9$ | 98. 4 |
| 84. 0.3125 | 89. 0.625 | 94. 90 | 99. 15 |
| 85. 1000 | 90. 250 | 95. $2/9$ | 100. 9 |
| 101. $79 \div 8 = 9R7$
(a) $9 + 1 = 10$
(b) 7 people on extra | 106. $\frac{1}{6} \times 360 = 60$
$\frac{1}{9} \times 360 = 40$
$360 - 60 - 40 = 260$ | 113. $30\%(1600) =$
$0.3 \times 1600 = 480$ | 118. $6 \div 3 = 2$
$182 \div 2 = 91$ mi |
| 102. $12 + (15 - 5) + (11 - 5) = 28$ different songs
$32 - 28 = 4$ songs | 107. $9 \div 4 = 2\frac{1}{4}$ ft = 2 ft 3 in | 114. $2.84 \times 5 = \$14.20$ | 119. $9 \div 3 = 3$
$91 \times 3 = 273$ mi |
| 103. $2 \times 800 \times 13\% = \208 | 108. $1800 \div 4.5 = 400$ | 115. $12 \div 30 = \$0.40$ per pound
$32 \div 80 = \$0.45$ per pound
Option A is cheaper. | 120. $12 \div 6 = 2$
$182 \times 2 = 364$ mi |
| 104. $\frac{6}{54} = \frac{1}{9}$ | 109. $400 \times 6 = 2,400$ | 116. $4\frac{1}{2} \times 1\frac{1}{3} = 6$ (cups) | |
| 105. $\frac{1.6}{12} \times 420 = \frac{0.4}{3} \times 420 =$
$0.4 \times 140 = 4 \times 14 =$
$\$56.00$ | 110. $36\frac{1}{2} - 27\frac{3}{4}$
$= 9\frac{1}{2} - \frac{3}{4}$
$= 8\frac{3}{4}$ lb | 117. $1,800 \div 3 = 600$ mph | |
| | 111. $4^4 = 256$ hairs | | |
| | 112. $2000/50 = 40$ years | | |

Answer Key

- | | | | |
|---|---|--|--|
| 1. -8 | 6. -6 | 11. -14 | 16. -1 |
| 2. 14 | 7. -6 | 12. 42 | 17. 1 |
| 3. 13 | 8. -8 | 13. 32 | 18. -2 |
| 4. 18 | 9. -14 | 14. 7 | 19. -4 |
| 5. 20 | 10. 14 | 15. 6 | 20. -6 |
| 21. 575% | 26. $\frac{1}{4}$ | 31. $21\frac{11}{16}$ | 36. $23\frac{1}{12}$ |
| 22. 405% | 27. $\frac{1}{2}$ | 32. $20\frac{1}{2}$ | 37. $33\frac{5}{6}$ |
| 23. 187.5% | 28. $\frac{3}{8}$ | 33. $3\frac{2}{9}$ | 38. $15\frac{1}{2}$ |
| 24. 237.5% | 29. $\frac{3}{4}$ | 34. $6\frac{1}{2}$ | 39. $16\frac{1}{2}$ |
| 25. 362.5% | 30. $\frac{5}{8}$ | 35. $13\frac{1}{10}$ | 40. $1\frac{3}{8}$ |
| 41. 4 | 46. 5 | 51. 3.2 | 56. -1 |
| 42. -4 | 47. 7 | 52. -2 | 57. 1 |
| 43. 7 | 48. -7 | 53. -5 | 58. 5 |
| 44. 9 | 49. -5 | 54. -3 | 59. -4 |
| 45. 9 | 50. 5 | 55. -2 | 60. 8 |
| 61. $-6 \times 8 = -48$. The diver is 48 meters below the start. | 70. $-3 \times -8 = 24$. The temperature is 24 degrees higher than the falling forecast. | 79. $\text{GCF}(54, 36) = 18$
$\text{GCF}(18, 24) = 6$ | 83. $15 - 3 = 12$
(a) $12 \div 2 = \$6.00$ (Dave)
(b) $6 + 3 = \$9.00$ (Carl)
Use the following diagram to solve. |
| 62. $-7 \times 3 = -21$. The stock is down \$21. | 71. Julio = 15
Erin = 30
Kesha = 37
Total = <u>82</u> | 80. $84 \times \frac{6}{6+8} = 84 \times \frac{3}{7} = 36$ | |
| 63. $-9 \times 2 = -18$. The temperature drops 18 degrees. | 72. 14,776 feet | 81. $54 \div 3 = \$18.00$ (each hour Friday, better)
$60 \div 4 = \$15.00$ (each hour Saturday) | |
| 64. $-3 \times 6 = -18$. The team loses 18 points. | 73. They are 13, 14, and 15.
Ans = <u>13</u> | 82. (a) $D: 6 \Rightarrow \frac{6}{10} \times 550 = \330 for Dave
(b) $B: 3 \Rightarrow \frac{3}{10} \times 550 = \165 for Bill
(c) $F: 1 \Rightarrow \frac{1}{10} \times 550 = \55 for Fred | |
| 65. $8 \times 7 = 56$. The hiker is 56 meters higher. | 74. $39 - 3 = 36$
$36 \div 9 = 4$ | | |
| 66. $12 \times 4 = 48$. The account is up \$48. | 75. $3 + 39 = 42$
$42 \times 9 = 378$ | | |
| 67. $6 \times 5 = 30$. It is 30 meters higher than where it started. | 76. $39 \times 3 = 117$
$117 - 9 = 108$ | | |
| 68. $-4 \times -9 = 36$. The balance rises by \$36. | 77. $39 \div 3 = 13$
$13 + 9 = 22$ | | |
| 69. $-3 \times -6 = 18$. The score increases by 18 points. | 78. $0.5 \times 3 = 1.50$
$3.90 - 1.50 = 2.40$
$2.4 \div 2 = \$1.20$ | | |
| | | | 84. $30 \div 2 = \$15$ |
| | | | 85. 6,749 |
| | | | 86. C |
| | | | 87. $L: = \frac{1}{2}(10 + 6) = 8$
$S: = \frac{1}{2}(10 - 6) = 2$ |
| | | | 88. (a) $2.13 + 3.12 = \$5.25$
(b) $5.25 \times 2 = \$10.50$ |
| | | | 89. $1 + 9 + 1 + 2 = \underline{13}$ |
| | | | 90. $(20 \div 8) \times 60 = \150 |

Answer Key

1. $3^{2+4} = 3^6$
2. $10^{2+3} = 10^5$
3. $3^{5-2} = 3^3$
4. 3^6
5. 5^6
6. $2^2 \times 2^3 = 2^{2+3} = 2^5$
7. 3^7
8. 2^{120}
9. 2^{61}
10. 2^{3600}
11. 2
12. 2^3
13. $x^{2+5} = x^7$
14. $x^{11-5} = x^6$
15. $\frac{1}{x^2}$
16. x^{12}
17. y^4
18. x^6
19. $x^{4+2+5+7} = x^{18}$
20. $\frac{1}{25.5}$
21. 5.6×10^{12}
22. 7.2×10^8
23. 4.8×10^9
24. 6.3×10^8
25. 9×10^{15}
26. 1.8×10^{22}
27. 7.2×10^{23}
28. 5×10^{13}
29. 3.2×10^{24}
30. 3.6×10^{13}
31. 7.5×10^{-3}
32. 8×10^{-2}
33. 8.75×10^9
34. 9×10^9
35. 1×10^{-5}
36. 9×10^{10}
37. 5×10^6
38. 1.2×10^{-8}
39. 1.2×10^{11}
40. 2×10^{-2}
41. $x^2 - 7x + 6$
42. $x^2 - x - 30$
43. $x^2 - 9x + 18$
44. $1.2x^2 - 4.8x - 14.4$
45. $15x^2 - 150x + 360$
46. $2.5x^2 - 7.5x - 45$
47. $1.5x^2 + 7x + 4$
48. $-2x^2 + \frac{1}{3}x + 4$
49. $12x^2 + 10x + 2$
50. $-3x^2 - 4.4x + 1$
51. -2, 1
52. 1.6, 0.64
53. $(2x + 3)^2$
54. $(3x + 2)^2$
55. 81, $(4x - 9)^2$
56. 12, 36
57. 1.8, 0.81
58. $(2x + 5)^2$
59. $(3x + 1)^2$
60. 16, $(5x - 4)^2$
61. $3.5 + 2.5$ & $3.5 - 2.5$
Roots = 6 & 1
62. $1 + 3$ & $1 - 3$
Roots = 4 & -2
63. 1 & 5.5
 $1 + 5.5$ & $1 - 5.5$
Roots = 6.5 & -4.5
64. 3.5 & 1
 $3.5 + 1$ & $3.5 - 1$
Roots = 4.5 & 2.5
65. $-\frac{2}{3}$ & $2\frac{1}{3}$
 $-\frac{2}{3} + 2\frac{1}{3}$ & $-\frac{2}{3} - 2\frac{1}{3}$
Roots = $1\frac{2}{3}$ & -3
66. (AI)
 $\angle 3 = \angle 2$ (vertical angle)
 $\angle 2 = \angle 6$ (corresponding angles postulate)
 $\angle 3 = \angle 6$ (transitivity).
(CI)
 $\angle 3 + \angle 1 = 180^\circ$ (linear pair)
 $\angle 5 = \angle 1$ (corresponding angles postulate)
 $\angle 3 + \angle 5 = 180^\circ$.
(AE)
 $\angle 3 = \angle 6$ (Established previously).
 $\angle 1 + \angle 3 = \angle 6 + \angle 8$ ($= 180^\circ$ linear pair)
 $\angle 1 = \angle 8$ (cancellation property)
(CE)
 $\angle 1 = \angle 5$ (corresponding angles postulate)
 $\angle 7 = \angle 3$ (corresponding angles postulate)
 $\angle 3 + \angle 5 = 180^\circ$ (Established in CI)
 $\angle 1 + \angle 7 = 180^\circ$ (substitution property)
67. Let x , y , and z be the areas of the three parts as below.



Then we have

$$x + y = 12$$

$$z + y = 12$$

$$x = z \text{ (cancellation property)}$$

$$68. AC + BC = AB$$

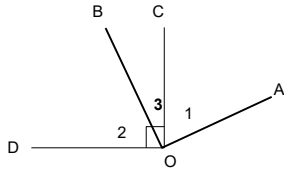
$$BD + BC = CD$$

$$AB = CD \text{ (given)}$$

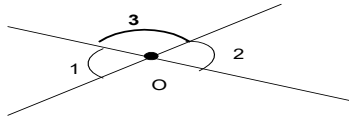
$$AC = BD \text{ (cancellation property)}$$

MAP 270+ (T1) Issue 6

69. $\angle 1 + \angle 3 = 90^\circ$ (given)
 $\angle 2 + \angle 3 = 90^\circ$ (given)
 $\angle 1 = \angle 2$ (cancellation property)



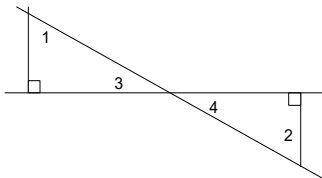
70. $\angle 1 + \angle 3 = 180^\circ$ (linear pair)
 $\angle 2 + \angle 3 = 180^\circ$ (linear pair)
 $\angle 1 = \angle 2$ (cancellation property)



71. $AB = BC$ (given)
 $BC = CD$ (given)
 $AB = CD$ (transitivity)

72. $\angle 1 = 180^\circ - \angle 2$ (linear pair)
 $\angle 3 = 180^\circ - \angle 2$ (given)
 $\angle 1 = \angle 3$ (transitivity)

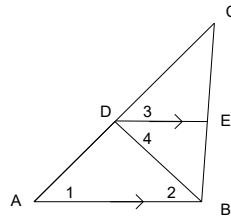
73. $\angle 1 = 90^\circ - \angle 3$
 $\angle 2 = 90^\circ - \angle 4$
 $\angle 3 = \angle 4$ (vertical angle)
 $\angle 1 = \angle 2$ (transitivity)



74. $\angle 1 = \angle ABC$ (vertical angle)
 $\angle 2 = \angle ACB$ (vertical angle)
 $\angle 1 = \angle 2$ (transitivity)
75. $\angle AOC = \angle 1 + \angle 2$ (angle addition property)
 $\angle BOD = \angle 3 + \angle 2$ (angle addition property)
 $\angle 1 = \angle 3$ (cancellation property)

76. $\angle 1 + \angle 2 = 90^\circ$ (given)
 $\angle 4 + \angle 3 = 90^\circ$ (given)
 $\angle 2 = \angle 3$ (given)
 $\angle 1 = \angle 4$ (cancellation property)

77. $\angle 3 = \angle 1$ (alt. int.)
 $\angle 4 = \angle 2$ (corr. angles)
 $\angle 1 = \angle 2$ (given)
 $\angle 3 = \angle 4$ (transitivity)



78. $\angle 3 = \angle 1$ (corr. angles)
 $\angle 4 = \angle 2$ (alt. int.)
 $\angle 1 = \angle 2$ (given)
 $\angle 3 = \angle 4$ (transitivity)
 $\angle 4 = \angle 5$ (bisector, given)
 $\angle 3 = \angle 4 = \angle 5$ (transitivity)
 $\angle 3 = \frac{1}{3}(180^\circ) = 60^\circ$

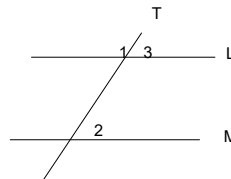
79. 70°

80. $\angle DCA = \angle BAC = 35^\circ$ (alt. int. of $AB \parallel CD$)

81. $\angle ACB = 180^\circ - 70^\circ - 35^\circ = 75^\circ$

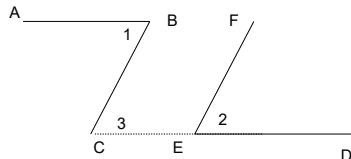
82. $\angle 1 = 180^\circ - \angle A$ (consec. int. angles of $AB \parallel CD$)
 $\angle 2 = 180^\circ - \angle A$ (consec. int. angles of $AD \parallel BC$)
 $\angle 1 = \angle 2$ (transitivity)

83. $\angle 1 + \angle 3 = 180^\circ$ (linear pair)
 $\angle 2 = \angle 3$ (corr. angles)
 $\angle 1 + \angle 2 = 180^\circ$ (substitution)



84. $\angle 1 + \angle 2 = \angle 4 + \angle 3 = 90^\circ$ (given) and $\angle 2 = \angle 3$ (given) $\rightarrow \angle 1 = \angle 4$ (cancellation).

85. Draw auxiliary line EF
 $\angle 1 = \angle 3$ (alt. int. $AB \parallel CE$)
 $\angle 3 = \angle 2$ (corr. angles $BC \parallel EF$)
 $\angle 1 = \angle 2$ (transitivity)



MAP 270+ (T1) Issue 6

86. 5

Draw an auxiliary line AE; ABCE is a parallelogram, thus

$$CE = AB = 3$$

$$DE = 8 - 3 = 5$$

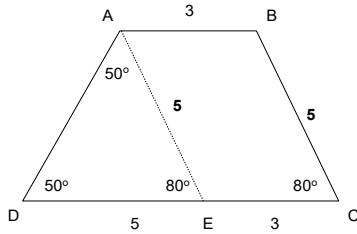
Note that

$$\angle AED = \angle BCE = 80^\circ \text{ (corresponding angle)}$$

$$\angle DAE = \angle ADE = 50^\circ$$

Thus,

$$AE = DE = 5$$

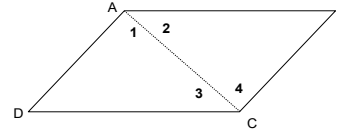


87. Method I:

$$\angle 1 = \angle 4 \text{ (alt. int. angles w.r.t. AD//BC)}$$

$$\angle 2 = \angle 3 \text{ (alt. int. angles w.r.t. AB//CD)}$$

$$\angle A = \angle 1 + \angle 2 = \angle 3 + \angle 4 = \angle C$$



Method II:

$$\angle A = 180^\circ - \angle D \text{ (consec. int. w.r.t. AB//CD)}$$

$$\angle C = 180^\circ - \angle D \text{ (consec. int. w.r.t. AD//BC)}$$

$$\angle A = \angle C \text{ (transitivity)}$$

Answer Key

1. C
2. C
3. C
4. C
5. 390

6. 15
7. B
8. D
9. C
10. D

11. B
12. B
13. C
14. D
15. A

16. D
17. A
18. B
19. C
20. C

21. C
22. 87,5
23. B
24. C
25. A

26. B
27. 36
28. 15
29. A
30. B

31. C
32. B
33. B
34. C
35. D

36. B
37. D
38. B
39. 70.4
40. C

41. 10
42. B
43. C
44. C